

REMARKS

A total of 36 claims remain in the present application. The following comments are presented in response to the Office Action mailed September 18, 2006, wherefore reconsideration of this application is requested. Referring to the text of the Office Action:

- Figure 2 has been objected to as allegedly failing to identify the subject matter thereof as prior art;
- claims 1, 3-5, 8-14, 17, 19-24, 26-28, 30-34 and 37 stand rejected under U.S.C. § 103(a), as being unpatentable over the teaching of United States Patent Application Publication No. 2002/0149823 (Bergano et al.) in view of admitted prior art (APA) represented by figure 2 and paragraphs 0036 and 0038 of the specification;
- claims 6, 7, 15, 16, 18, 29, 35, 36 and 38 are objected to as being dependent on a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As an initial matter, applicant appreciates the Examiner's indication of allowable subject matter in claims 6, 7, 15, 16, 18, 29, 35, 36 and 38. The Examiner's objections to Figure 2, and claim rejections under 35 U.S.C. §103(a) are believed to be traversed in view of the following discussion.

Objections to the Figures

At paragraph 1 of the detailed action, the Examiner asserts that Figure 2 should be designated as prior art "because only that which is old is illustrated". Applicant disagrees.

Paragraph 0025 of the specification states that "FIG. 2 is a block diagram schematically illustrating operation of a system in accordance with a first embodiment of the

present invention". Similarly, Paragraph 0035 of the specification states that "FIG. 2 is a block diagram schematically illustrating operation of a system in accordance with a first embodiment of the present invention.". Applicant is of the view that figure 2 shows elements of the present invention, which are not known in the prior art, and as such should properly NOT be designated as prior art.

In that respect, it will be noted that paragraph 0036 of the specification states that "various methods known in the art may be used to measure the polarization state of the received optical signal 16". One method is to split the received signal into orthogonal polarizations, and then measure the power level of each polarization. The embodiment of FIG. 2 illustrates a physical arrangement which performs this operation. However, it is plainly obvious that FIG. 2 illustrates more than just a beam splitter and a pair of photodiodes. In particular, FIG. 2 also shows a multiplier 30 which generates a "signal indicative of a proportionality ratio between the two detected power levels" [Para 0036], and a "processor 20 which operates to compare the measured polarization state with a previously known initial polarization state." [Para. 0035]. Applicant believes that this combination of elements is not known in the prior art, and the Examiner has offered no argument or evidence that might suggest otherwise.

Accordingly, reconsideration and withdrawal of the Examiner's objection to figure 2 is believed to be in order, and such action is courteously requested.

Rejections under 35 U.S.C. §103(a)

As noted in applicant's response filed July 6, 2007, Bergano et al fail to teach all of the elements of independent claims 1, 19 and 24. None of the other known prior art provides the missing teaching. Indeed, the Examiner's new rejection relies entirely on his contention that FIG. 2 of the specification illustrates "only that which is old". However, as noted above, this assertion is explicitly contradicted by the specification. While various methods of measuring PDL and representing the measurement result are known in the prior art, Applicant reaffirms

that neither the combination of elements shown in FIG. 2, nor the advantages obtained using that combination of elements, are known in the prior art.

For greater certainty, it will be well recognised that individual elements of the present invention, such as the PDL detector 18 using in the embodiment of FIG. 2, are known in the prior art. However, the mere existence of such devices does not teach or fairly suggest the combination of the present invention. Nor does the teaching of Bergano et al provide motivation to make the combination of the present invention. As noted in applicant's response filed July 6, 2007, Bergano et al explicitly teach that PDL is directly determined from the modulation amplitude of the receive signal 407, at the polarization modulation frequency, f_{pol} . Whether or not this method could be replaced by techniques built around a PDL detector is moot, because Bergano et al provide no teaching or suggestion of any such alternative.

Independent claims 1, 19 and 24 are explicitly drawn to the combination of elements that achieve the advantages of the present invention. Receivers embodying this combination of elements are illustrated in FIGs 2 and 3, and described in the accompanying description. It is axiomatic that the teaching of the present invention cannot properly be used as a basis for rejecting the claims of the present application.

Accordingly, it is submitted that the Examiner's rejection under 35 USC 103(a) is improper, and must be withdrawn.

If any extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this response, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our Deposit Account No. 19-5113.

Respectfully submitted,

/Kent Daniels/

By: Kent Daniels, P.Eng.
Reg. No. 44206
Attorney for the Applicants

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Ogilvy Renault
Suite 1600
1981 McGill College Avenue
Montreal, Quebec
Canada, H3A 2Y3
(613) 780-8673